Abstract

An interlace motion artifact detector which identifies video image spatial frequencies characteristic of motion artifacts. The detected frequency is the maximum which can be represented by the vertical sampling rate of the video format (i.e., the Nyquist frequency). This frequency is detected by a pair of partial Discrete Fourier Transforms (DFT) which each calculate only the frequency component of interest. Additional vertical frequency components at one half and one quarter the interlace motion artifact frequency are also detected via a partial DFT. The presence of these lower frequencies acts as an indication of an erroneous motion artifact detection. Additionally, the dynamic range and maximum level of the video data is used as an indication of when to boost the frequency detection levels in areas of low brightness and/or contrast.

10095745.082801